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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,118	12/27/2000	Dae Jin Myung	YHK-059	4164

34610 7590 12/17/2003

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EXAMINER

AWAD, AMR A

ART UNIT PAPER NUMBER

2675

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/748,118

Applicant(s)

MYUNG, DAE JIN

Examiner

Amr Awad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-19, 21-26, 31 and 33-38 is/are rejected.
- 7) ☐ Claim(s) 20, 27-30 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa in view of Weber (US patent NO. 5,430,458).

As to independent claim 1, Kanazawa (FIG. 4) teaches a plasma display panel wherein address interval for selecting discharge cell is included and a display area, and a non-display area co-exist (claim 3, lines 49-63). Kanazawa teaches a common sustaining electrodes (X) formed in parallel to the scanning/sustaining electrodes (Y1-YN) at each discharge cell (col. 4, lines 39-60). Kanazawa (figure 2) teaches at least two dummy electrodes (auxiliary electrodes 23a and 23b) (col. 4, lines 7-18). Kanazawa does not expressly teach that the at least two dummy electrodes being provided at the non-display area, for supplying the non-display area with charged particles in address interval.

However, Webber (figures 6 and 11) teaches a plasma display panel that includes dummy electrodes at the non-display area (in Webber's device, the dummy pulses are supplied in the display and non-display area) (col. 6, line 57 through col. 7, line 20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Webber having dummy electrodes (lines) to be incorporated to Kanazawa's device so as motivated by Webber, to reduce the flickering of the display device (col. 4, lines 28-40).

As to claim 2, Webber teaches that the address driver can be used as address driver and as a dummy driver (col. 7, lines 14-20).

As to claim 3, Webber teaches that the discharge cells are supplied with charged particles produced by the discharging between the dummy electrodes (col. 6, lines 49-63).

As to claim 4, Webber teaches, as can be seen in figure 1 that the dummy electrodes (lines) are formed parallel to the scanning/sustaining electrodes.

As to claim 5, having the common sustaining electrodes maintain ground potential is inherent (see Kanazawa, col. 5, lines 8-21).

As to claim 13, Kanazawa (figure 4) teaches address electrodes (13) perpendicular to the scanning/sustaining electrodes (Y electrodes) and common sustaining electrodes (X electrodes) (col. 4, lines 38-60).

As to claims 14-16, Webber teaches that the at least two dummy electrodes supply the non-display area with charged particles formed during an address interval, and wherein the non-display does not include any discharge cells (col. 6, line 57 through col. 7, line 20).

As to claim 17, it is obvious that the non-display area would be outside the display area because the display area is always in the middle of the display.

As to claim 18, as can be seen above, Webber shows that the auxiliary discharge is formed by the at least two dummy electrodes in the non-display area.

A to claim 19, Webber shows that some of the dummy electrodes provided during a negative scanning pulse (col. 6, line 57 through col. 7, line 20 and figure 7) which fairly reads on claim 19,

3. Claims 6-12, 21-26, 31 and 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US patent NO. 6,181,305; hereinafter referred to as Nguyen) in view of Webber.

As to independent claim 6, Nguyen (figure 1B) teaches a plasma display panel wherein an address interval for selecting discharge cells is included and a display area and non-display area co-exist (col. 4, lines 10-36). Nguyen (figures 4A-4C) teaches applying auxiliary pulse V_v and scanning pulse to the scanning/sustaining electrodes formed at the display area so that the scanning/sustaining electrodes can sequentially cause a second auxiliary discharge (col. 7, lines 11-47).

Nguyen does not expressly teach having a dummy electrode driver for applying dummy pulse to dummy electrodes such that the dummy electrodes formed at the non-display area can cause a first auxiliary discharge in the address interval.

However, Webber (figure 1) teaches a plasma display panel that includes dummy electrodes at the non-display area (in Webber's device, the dummy pulses are supplied in the display and non-display area) (col. 6, line 57 through col. 7, line 20). Webber

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teaches that the address driver can be used as address driver and as a dummy driver (col. 7, lines 14-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Webber having dummy electrodes (lines) to be incorporated to Nguyen's device so as motivated by Webber, to reduce the flickering of the display device (col. 4, lines 28-40).

As to claim 7, Webber teaches that the discharge cells are supplied with charged particles produced by the discharging between the dummy electrodes (col. 6, lines 49-63).

As to claim 8, Nguyen shows in figures 4A-4C that the auxiliary pulse is positive, and Nguyen shows in figure 3 that the scanning pulse is negative (col. 6, lines 12-63).

As to independent claim 9, the claim is a method claim corresponds to apparatus of claim 6 and would be analyzed as previously discussed with respect to claim 6.

As to claim 10, as can be seen above, Nguyen teaches all the limitation of claim 10 except the citation of an auxiliary pulse to the scanning/sustaining electrodes to produce charged particles within the discharge cells in the address interval.

However, Webber (figure 1) teaches a plasma display panel that includes dummy electrodes at the non-display area (in Webber's device, the dummy pulses are supplied in the display and non-display area) (col. 6, line 57 through col. 7, line 20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Webber having dummy

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electrodes (lines) to be incorporated to Nguyen's device so as motivated by Webber, to reduce the flickering of the display device (col. 4, lines 28-40).

As to claim 11, as can be seen from figure 3 of Nguyen, the scanning pulses are negative, and the auxiliary pulses of Webber (figure 6) are positive.

As to independent claim 12, the claim is substantially similar to the apparatus of claim 6 and would be analyzed as previously discussed with respect to claim 6 above.

As to claims, 21-26, these claims are similar to claims 14-19 which are rejected above in view of Webber, and would be analyzed as previously discussed with respect to claims 14-19.

As to claims 31 and 33-35, the limitations in claims 31 and 34 are similar and included in the limitations included in claims 14-19 and would be analyzed as previously discussed with respect to those claims.

As to claims 36-38, the claims are similar to claims 6-8 respectfully and would be analyzed as previously discussed with respect to claims 6-8.

Allowable Subject Matter

4. Claims 20, 27-30, 32 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments filed September 17, 2003 have been fully considered but they are not persuasive.

Applicant (pages 13-14) argued that Kanazawa fails to disclose or suggest the feature in claim 9 of applying a pulse to a dummy electrode located in a non-display area outside a circumference of a display area of a plasma display panel. Examiner respectfully submits that Kanazawa is not cited to teach such limitations. In fact, the Office Action specifically states that "Kanazawa does not expressly teach that the at least two dummy electrodes being provided at the non-display area, for supplying the non-display area with charged particles in address interval" (Last paragraph of page 3). The examiner merely indicates that the claim is broad enough that the two portions (23a and 23b) of the electrode 11 can be considered to be auxiliary electrodes. Accordingly, the Examiner cited Webber to show the claimed limitation.

Applicant (bottom of page 14) argued that the dummy address pulses taught by Weber are not within non-display areas as recited in claim 9 and are clearly within the display areas. Examiner respectfully submits that the claim is broad enough to read on the cited reference. The non-display areas can be separate areas of the display panel or can be the area between two electrodes (X and Y) where no discharge between the two electrodes occurs. For example, in Kanazawa's figure 4 for example there is a discharge between the first two electrodes (X1 and Y1) (i.e., display area), and there is no discharging between Y1 and X2 (i.e., no display). Therefore, the limitations as claimed fairly read on the cited references. Similar arguments are presented with

respect to claims 6-8 and 12. Examiner may agree that the invention as recited in the specification (for example figures 5 and 6) may read on the cited references. However, the combinations shown in the Office Action above teach the invention as claimed.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703)308-8485. The examiner can normally be reached on Monday-Friday, between 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Saras can be reached on (703)305-9720. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4750.

A handwritten signature in black ink, appearing to read "A.A.", with a large, sweeping flourish extending from the end of the signature.

A.A.
December 13, 2003